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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/760,273	01/21/2004	Kia Silverbrook	MPA02US	1031

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EXAMINER	
LEBRON, JANNELLE M	

ART UNIT	PAPER NUMBER
2861	

DATE MAILED: 12/15/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/760,273	SILVERBROOK ET AL.	
	Examiner	Art Unit	
	Jannelle M. Lebron	2861	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *21 January 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-11* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-11* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *21 January 2004* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *11/03/2004*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Drawings

1. The drawings are objected to because Figure 17C is referenced in the specification on page 14 line 1, page 15 line 19, and possibly others. This was already brought to the applicant in the Pre-Exam Formalities Notice mailed 04/29/2004. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

2. Claim 7 is objected to because of the following informalities: the words "millimeters" and "micrometers" were misspelled. Appropriate correction is required.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-3, 5, and 8-11 are rejected under 35 U.S.C. 102(b) as being anticipated by Silverbrook et al. (US Patent 6,439,908).

5. Regarding claim 1, Silverbrook et al. discloses a printhead module (12) for a printhead assembly (10), comprising at least two printhead integrated circuits (18), each of which has nozzles (42) formed therein for delivering printing fluid onto the surface of print media, and a support member (28) supporting the printhead integrated circuits (18),

wherein the support member (28) has a plurality of longitudinally extending channels (72) for carrying different printing fluids for the printhead integrated circuits (18), and

the support member (28) is selectable to meet specific requirements as to the number of said printing fluids to be employed for printing (column 2, lines 17-19, 59-67).

6. Regarding claim 2, Silverbrook et al. discloses a printhead module (12) wherein: the support member (28) and the at least two printhead integrated circuits (18) are formed as a unitary arrangement with at least one fluid distribution member (26) mounting the at least two printhead integrated circuits (18) to the support member (28), and an electrical connector for connecting electrical signals to the at least two printhead integrated circuits (column 3, lines 59-65)); and

the support member (28) includes a plurality of apertures (as shown in figure 8) extending through a wall of the support member (28) arranged so as to direct the printing fluid from the plurality of channels (72) to associated nozzles in both, or if more than two, all of the printhead integrated circuits (18) for printing by way of respective ones of the fluid distribution members (column 4, lines 41-44).

7. Regarding claim 3, Silverbrook et al. discloses a printhead module (12) wherein the printhead module (12) is arranged to be removably mounted to the printhead assembly (column 1, line 66 – column 2, line 5).

8. Regarding claim 5, Silverbrook et al. discloses a printhead module (12) wherein the printhead integrated circuits (18) are individually supported upon a separate said fluid distribution member (column 2, lines 17-19).

9. Regarding claim 8, Silverbrook et al. discloses a printhead module (12) wherein a lower surface of the at least one fluid distribution member (26) is attached to the upper surface of the support member (28) by an adhesive material (column 6, lines 14-29).

10. Regarding claim 9, Silverbrook et al. discloses a printhead module (12) wherein

the adhesive material is deposited to form a gasket (40) which surrounds each of the apertures of the support member (28) and each of corresponding apertures formed in the lower surface of the at least one fluid distribution member (26) so as to form a seal between the respective apertures (as shown in figures 8, 10, and 11; column 6, lines 14-40).

11. Regarding claim 10, Silverbrook et al. discloses a printhead module (12) wherein:

the apertures of the support member (28) are formed in a row extending across the support member with respect to the longitudinally extending direction of the support member (as shown in figure 8); and

two deposits of the adhesive material are deposited on either side of the row of apertures to provide stability for the mounting arrangement (column 6, lines 16-20).

Claim Rejections - 35 USC § 103

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

13. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

14. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Silverbrook et al. (US Patent 6,439,908) in view of Silverbrook (WO 2001/089849).

Silverbrook et al. ('908) meets the claimed limitations as set forth except "a support member formed with a further channel for delivering air to the at least two printhead integrated circuits for maintaining the nozzles of the at least two printhead integrated circuits substantially free from impurities."

Silverbrook (2001/089849) teaches an ink distribution structure that supplies air to each print chip (27) via an air inlet port (61) thus preventing the build-up of any dust or unwanted contaminants at the apertures (44) in the nozzle guard (page 7, lines 5-9).

It would have been obvious to one of ordinary skill in the art at the time of the invention to include a channel for delivering air to the printhead circuits. One would have been motivated to modify the invention to improve print quality as taught by Silverbrook.

15. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Silverbrook et al. (US Patent 6,439,908) in view of Lu et al. (US 2003/0007042).

Silverbrook et al. teaches a sealing adhesive; however, it does not disclose the sealing adhesive being a curable resin.

Lu et al. discloses a sealing adhesive being an epoxy, a type of resin (paragraph 0017).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the disclosure of Silverbrook et al. with that of Lu et al. in order to create a more durable apparatus.

Double Patenting

16. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., In re Berg, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); In re Goodman, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); In re Longi, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); In re Van Ornum, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); In re Vogel, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and In re Thorington, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

17. Claims 1-11 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-11 of copending Application No. 10/760,272. Although the conflicting claims are not identical, they are not patentably distinct from each other because the reference application recites:

18. A printhead module for a printhead assembly, comprising at least two printhead integrated circuits, each of which has nozzles formed therein for delivering printing fluid onto the surface of print media, and a support member supporting the printhead integrated circuits (claim 1, lines 1-3),

wherein the support member has a plurality of longitudinally extending channels for carrying different printing fluids for the printhead integrated circuits (claim 1, lines 6-7), and

the support member is selectable to meet specific requirements as to the number of said printing fluids to be employed for printing (It would have been obvious to one in ordinary skill in the art to select a support member in which the number of channels equal the quantity of printing fluids to be used in order for the printhead assembly to work properly).

19. A printhead module according wherein: the support member and the at least two printhead integrated circuits are formed as a unitary arrangement with at least one fluid distribution member mounting the at least two printhead integrated circuits to the support member, and an electrical connector for connecting electrical signals to the at least two printhead integrated circuits (claim 1, lines 1-5); and

the support member includes a plurality of apertures extending through a wall of the support member arranged so as to direct the printing fluid from the plurality of channels to associated nozzles in both, or if more than two, all of the printhead integrated circuits for printing by way of respective ones of the fluid distribution members (claim 1, lines 7-10).

20. A printhead module wherein the printhead module is arranged to be removably mounted to the printhead assembly (claim 2).

21. A printhead module wherein the support member is formed with a further channel for delivering air to the at least two printhead integrated circuits for maintaining the nozzles of the at least two printhead integrated circuits substantially free from impurities (claim 4).

22. A printhead module wherein the printhead integrated circuits are individually supported upon a separate said fluid distribution member (claim 5).

23. A printhead module wherein:

each of the fluid distribution members is formed as a laminated stack of at least three layers comprising an upper layer upon which the associated printhead integrated circuit is mounted, a middle layer and a lower layer which is attached to an upper surface of the support member (claim 6, lines 1-4);

the lower layer includes first distribution apertures arranged to align with respective ones of the apertures in the support member and first distribution channels in an upper surface thereof associated with respective ones of the first distribution

apertures, the first distribution apertures having substantially the same diameter as the apertures in the support member (claim 6, lines 5-8);

the middle layer includes second distribution apertures arranged to align with the first distribution channels of the lower layer, the second distribution apertures having a smaller diameter than the first distribution apertures (claim 6, lines 9-11);

the upper layer includes second distribution channels in a lower surface thereof arranged to align with the second distribution apertures of the middle layer and third distribution apertures associated with the second distribution channels, the third distribution apertures having a smaller diameter than the second distribution apertures (claim 6, lines 12-15); and

the associated printhead integrated circuit includes nozzle supply apertures arranged to align with the third distribution apertures of the upper layer and to direct fluid to respective ones of the nozzles, the nozzle supply apertures having substantially the same diameter as the third distribution apertures (claim 6, lines 16-18).

24. A printhead module wherein the apertures of the support member have a diameter of the order of millimeters and the nozzle supply apertures of the at least two printhead integrated circuits have a diameter of the order of micrometers (claim 7).

25. A printhead module wherein a lower surface of the at least one fluid distribution member is attached to the upper surface of the support member by an adhesive material (claim 8).

26. A printhead module wherein the adhesive material is deposited to form a gasket which surrounds each of the apertures of the support member and each of

corresponding apertures formed in the lower surface of the at least one fluid distribution member so as to form a seal between the respective apertures (claim 9 - The fact that the reference application does not recite the "gasket" does not obviate the issue of double patenting).

27. A printhead module wherein:

the apertures of the support member are formed in a row extending across the support member with respect to the longitudinally extending direction of the support member (claim 10, lines 1-3); and

two deposits of the adhesive material are deposited on either side of the row of apertures to provide stability for the mounting arrangement (claim 10, lines 4-5).

28. A printhead module wherein the adhesive material is a curable resin (claim 11).

29. This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jannelle M. Lebron whose telephone number is (571) 272-2729. The examiner can normally be reached on Monday thru Friday 8:30am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David L. Talbott can be reached on (571) 272-1934. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JML
12/05/05

LAMSON NGUYEN
PRIMARY EXAMINER
12/08/05